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Abstract :

Wind tunnel studies were carried out to determine the effect of vortex plate fixed at the leading edge of wing, on the aerodynamic characteristics of MIG-21M aircraft model. Tests Reynolds number based on the mean aerodynamic chord varied from 3.9 to 6.0 million in the Mach number range of 0.5 to 1.8. Angle of attack varied from -4 to 20 degrees. The results have demonstrated that vortex plate can be used as an effective device in increasing the lift to drag ratio of the aircraft model at moderate to large lift coefficients at subsonic and transonic speeds. The effectiveness is observed to decrease with increase in Mach number.